LETTER FROM HUDSON FALL

THE RIVER

Will the E.P.A. finally make G.E. clean up its PCBs?

BY ELIZABETH KOLBERT

In June of 1968, a three-year-old girl arrived at Kyushu University Hospital, in Fukuoka City, Japan, with an acute, acne-like skin condition. Both of her parents and an older sister, it turned out, were similarly afflicted; over the next several months, three hundred and twenty-five more people in the Fukuoka Prefecture were found to have the same symptoms. Nine were pregnant women. Two of their babies were stillborn; the rest had skin that was stained brown, or, as the local doctors described it, "cola-colored." The illness was soon traced to a brand of cooking oil that had been inadvertently contaminated by polychlorinated biphenyls, or PCBs. News of the outbreak was slow to reach the United States, but when it did it seemed to confirm what some researchers had already begun to suspect about the safety of the chemical.

PCBs, which were first manufactured in this country in 1929, are made by combining two attached benzene rings with up to ten atoms of chlorine. They come in the form of a clear, viscous liquid, are relatively easy to produce, and exhibit many handy properties. They do not readily oxidize or react with acids or other chemicals, and they do not conduct electricity. For more than forty years, they were widely used as an insulating material in electrical equipment, like capacitors and transformers. They were also added to lubricants, hydraulic fluids, paints, and pesticides.

But what makes PCBs so useful—their stability—also makes them problematic. Once released into the environment, they can take decades to break down, and when they do the result can be a new compound that is equally dangerous. PCBs are lipophilic, meaning that animals who ingest them store them in fat cells, and they bioaccumulate, meaning that they become more concentrated as they move up the food chain. Just by eating meat or fish or drinking milk, we are ingesting PCBs, and virtually all of us have what is known in public-health circles as a "body burden" of the chemical, which, at least for those under fifty or so, probably began building up in utero. Unfortunately, one of the most efficient ways the human body gets rid of PCBs is via breast milk.

PCB levels in food were first regulated in the United States in the early nineteen-seventies, because it was suspected that in high doses the chemical caused cancer. Today, the Environmental Protection Agency categorizes PCBs as a "probable human carcinogen." Among public-health experts, though, the concern is increasingly about the risk that even low levels of PCBs may pose to fetal development. One of the earliest studies of this topic, begun in the nineteen-eighties, was carried out by Joseph and Sandra Jacobson, researchers at Wayne State University. The Jacobsons followed children of women who consumed fish from Lake Michigan, testing the children as infants, at age four, and at age eleven. They found that those who had had the greatest in-utero exposure to PCBs tended to have lower I.Q.s and lower reading scores than their peers. Recently, studies carried out in the Netherlands and in New York appear to confirm the relationship between prenatal PCB exposure and learning problems.

Dr. Walter Rogan, an epidemiologist at the National Institute of Environmental Health Sciences, who has also studied the effects of the chemical on children, pointed out to me that the difference between the PCB levels in the blood of mothers who would be considered highly exposed and those whose exposure would be considered ordinary was relatively tiny, measured in parts per billion. When I told him I was glad I had been unaware of my own level of PCB exposure during my two

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pregnancies, he assured me, "You don't want to know."

In New York State, the biggest consumer—and discarder—of PCBs has been the General Electric Corporation, which operated a pair of capacitor plants a mile or so apart on the Hudson River north of Albany. G.E. stopped dumping PCBs into the river in 1977, when they were outlawed, but over the previous thirty years more than a million pounds of the chemical washed into the river from the two factories, one in the town of Hudson Falls and the other in Fort Edward. Two hundred and seventy-five thousand pounds more was left to seep directly into the ground.

While the bulk of these PCBs has by now been carried downriver by the current, the heaviest concentrations are still to be found close to home, in sediments deposited in the Hudson just south of Fort Edward. Fishing along this section of the river, and, indeed, all the way down to Troy, forty miles away, is permitted on a catch-and-release basis only. Along the shoreline, the state has posted signs that show a schematic fish on a schematic dinner plate with a big "X" through both. "Fish from these waters have high levels of chemical contaminants (PCBs) that may cause reproductive and developmental effects and cancer," the signs read.

The E.P.A. has been trying to figure out what to do about the contaminated sediments in the Hudson for nearly twenty years. One option is to order them to be dredged up, which would entail treating and disposing of thousands of tons of sludge. Another is simply to leave things as they are. In the last decade, the E.P.A. has put off the date for releasing its decision eleven times. All the while, according to the agency's own findings, the sediments have been leaking PCBs into the Hudson at a rate of hundreds of pounds a year.

The decision to dredge or not to dredge turns on a number of highly technical issues—among them the evolving hydrology of the river, the long-term behavior of organic chemicals, and the statistics of risk. Yet it is almost impossible to have followed the case for even a small part of its tortured history and still believe that science is, fundamentally, what is at issue.

Ecological disasters, by their very nature, involve many levels of complexity. This should be a strong argument for taking every precaution to prevent them from happening in the first place. After the fact, however, it is almost always possible to argue that more needs to be known—a circumstance that tends to favor those who, for whatever reason, prefer inaction. Dredging would cost G.E. hundreds of millions of dollars, and it would still leave the company open to claims from various government agencies, acting on behalf of the public, which could run to a billion.

Sometime in the next few weeks, the E.P.A. is scheduled, finally, to release its decision on the Hudson. It is expected that the agency will recommend dredging, and it is also expected that, far from marking the conclusion of the process, this will initiate a whole new, maddeningly protracted round of delays.

One slogan goes, "A river runs through it." A town booster explains, "We didn't want to say, 'A Superfund site runs through it.'"

Not long ago, I arranged to take a tour of G.E.'s Hudson Falls operation. The capacitor plant is no longer functioning, and the only work going on at the site is toxic-waste cleanup. I had been told to report to a small building that once served as the plant office and is now the cleanup effort's headquarters. On my way in, I passed an illuminated plastic sign with the familiar G.E. logo on it and the motto "Working Every Day to Promote the Recovery of the Hudson River."

Inside, I was met by five representatives from G.E., including Stephen Ramsey, the company's vice-president for environmental issues; John Haggard, the director of the cleanup effort; and Mark Behan, a public-relations consultant. They were sitting in a large conference room whose only decoration was a cross-sectional map of the site taped to

the wall. Ramsey was clearly the most senior official there, and the others let him do most of the talking.

Ramsey wears rimless glasses and a gray beard and has a manner that is at once entirely relaxed and completely unyielding. For much of the Reagan Administration, he headed the environmental-enforcement unit of the United States Justice Department, yet, despite this experience, or perhaps because of it, he takes a dim view of government decision-making, especially as it concerns the Hudson.

Ramsey told me he was convinced that the E.P.A. was going to order an extensive dredging project. This was partly because word of a decision had begun to get out, and partly because he believed the agency to be biased toward dredging as a remedy. This bias, he argued, was structural. "The agency decided digging mud that was contaminated was a good thing because it showed action," he said. "It is not in the nature of large organizations to take a long time and spend a lot of money and conclude that nothing needs to be done."

After a while, we all put on hard hats and went to look around the site, which stretches over seventeen acres. The main structure is the old capacitor plant, a large, unprepossessing brick building that began its life as a paper-bag factory and sits seventy feet above the Hudson, on the top of a shale cliff. We descended several flights of wooden stairs and a set of catwalks festooned with Christmas lights to the ruins of an ancient paper mill. Underneath the mill is a long tunnel that, it was discovered several years ago, had been serving as a sort of collection system for PCBs that seeped from the capacitor plant into the bedrock. (This discovery was made, unfortunately, only after a wooden gate in the tunnel had broken and a large quantity of the PCBs trapped there had already washed into the river.) When we got to the tunnel, I saw several men wearing protective Tyvek suits working inside it.

Over the years, G.E. has offered various theories about the PCBs in the Hudson. Early on, the company posited that they were being broken down by microorganisms, though it has pretty much given up on this idea by now. More recently, it has argued that they are not a problem because they are being buried by clean sediment, and that, in any case, they don't pose a significant human health threat. "There is no credible evidence that PCBs cause cancer," the company wrote in a 1999 report.

G.E.'s latest theory is that it is the PCBs that washed out of the tunnel, and those that continue to seep out of the plant site, rather than the ones dumped prior to 1977, that are the ongoing source of contamination. This argument may seem self-defeating; G.E. is insisting that its own failure to clean up the site is, after twenty-five years, the main reason the river is still polluted. But at the core of the argument is a case for further delay. Ramsey explained it to me as follows: "Just in terms of common sense, in ordering how you would do a task, you don't try to clean up a spill on the floor until you turn the bottle back over and wipe the stuff off that's causing the puddle down below. And that, although perhaps somewhat of a homegrown analogy, is exactly the case here. Until and unless the source of PCBs is cut off, we feel quite strongly that you can't know whether dredging is unnecessary."

Of all the anti-dredging arguments Ramsey offered during my visit, I found the one about structural bias at the E.P.A. to be the most compelling. Even the agency acknowledges that the risks of dredging cannot be dismissed; the process could re-suspend chemicals that have remained buried, and damage the habitat that is the bottom of the river. It seemed to me entirely plausible, though, that the E.P.A., after fighting with G.E. for so long, would be loath to conclude that the best that could be achieved was the status quo. But when I asked what struck me as a pretty obvious follow-up question—what about the structural biases of G.E.?—Ramsey betrayed no recognition.

"We've not shied away from undertaking a lot of work, at a very high cost, particularly when we felt the work was justified," he said. "This is one in which we simply feel that the right thing to do is not to try to destroy the river to save it. All of the science here leads us to that conclusion."

Finally, I asked Ramsey how much time he thought would be needed to determine if the "spilled bottle" theory was,

indeed, correct. He did not hesitate. The reasonable thing for the E.P.A. to do, he said, would be to hold off a decision for at least another five years.

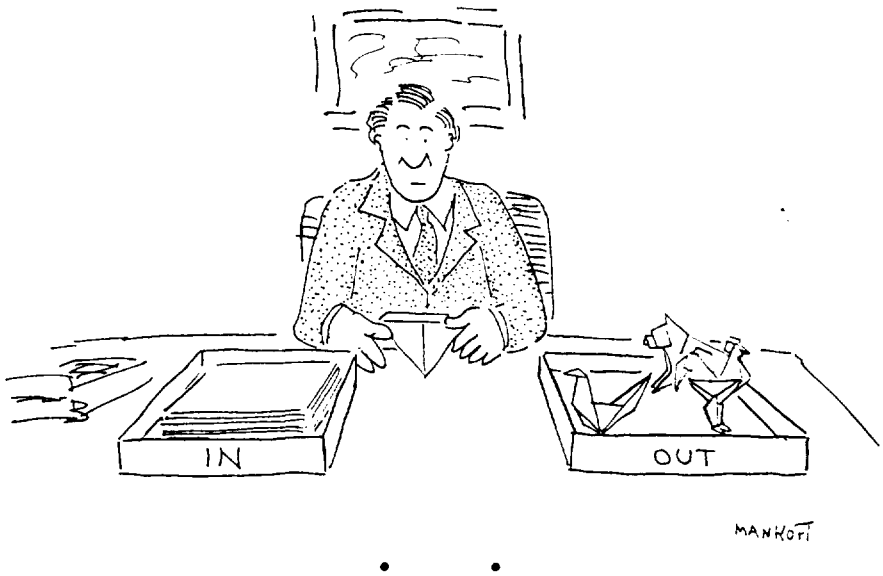
The federal Superfund, created in 1980, was intended to finance the cleanup of orphan toxic-waste sites—those where the polluter either could not be identified or, perhaps, no longer existed. In cases where the responsible party was known, the Superfund law mandated that the polluter would bear the cost. The law has had many unintended consequences, one of which is to provide corporations that have the resources to pay for a cleanup with a motive to use them to fight the government instead.

Thanks to PCBs, the Hudson River from Hudson Falls all the way to New York Harbor, two hundred miles south, is a federal Superfund site. G.E. was legally identified as the responsible party back in 1983, and has since spent millions of dollars supporting scientific research that challenges the findings of the E.P.A. It is currently spending millions more on an ad campaign in the Hudson Valley, aimed, quite explicitly, at "sending a message" to the agency. "More and more people oppose dredging," one ad that pictures eight ordinary citizens asserts.

The list of lobbyists G.E. employs on Capitol Hill, meanwhile, is a long one. Among the stars are Republicans such as Bob Livingston, the former House Appropriations Committee chairman, and Democrats such as George Mitchell, the former Senate minority leader. For many years, Gerald Solomon, the former chairman of the House Rules Committee, represented the district that includes G.E.'s capacitor factories, and during that time his unstinting defense of the company earned him the nickname "the congressman from G.E." Solomon, too, is now on retainer.

At the urging of these lobbyists, G.E.'s allies in Congress, in each of the last few years, have attached anti-dredging "riders" to the bill containing the appropriations for the E.P.A., and they have ordered up four separate investigations of the agency's assessment of the Hudson by the General Accounting Office. They have also tried, unsuccessfully, to force the E.P.A. to shift authority over the decision from the New York regional office to the national headquarters, in Washington.

One effect of all these maneuvers has been to postpone the E.P.A.'s announcement of its recommendations until the final days of the Clinton Administration. This means that it will be left to the new Administration either to follow through on the recommendations or to reject them. Speaking on the floor during a fight over the most recent anti-dredging rider, Senator Frank Lautenberg, Democrat of New Jersey, said, "You know, one of these amendments is there because it is strongly supported by General Electric, an extremely powerful corporation." Such riders, he added, could best be described



as "a delay of corporate responsibility."

PCB contamination destroyed commercial fishing on the Hudson, and it is the reason there is still a health advisory in effect. The advisory instructs young women and children to eat no fish caught below Hudson Falls, and urges everyone else to follow a series of complicated guidelines that fill two legal-size pages. Nevertheless, G.E.'s official posture toward the PCBs in the Hudson has always been unapologetic.

Jack Welch, who is G.E.'s chairman, was an up-and-coming vice-president when, in 1976, he was charged with representing the company in a set of negotiations with New York State over PCBs. It was the middle of New York's fiscal crisis, and G.E. reportedly threatened that, if pushed too hard, it would pull thousands of jobs out of the state. The settlement Welch engineered was immensely favorable to G.E.; the company paid just three million dollars, and the state—though not the federal government—gave up the option of holding G.E. responsible for a cleanup.

Now, as then, Welch portrays the company as blameless; a few years ago, he went so far as to upbraid a nun who had challenged him on this score at a stockholders' meeting. "Sister, you have to stop this conversation," Welch said. "You owe it to God to be on the side of truth here." Just this fall, in the middle of a generally glowing profile of him for "60 Minutes," Lesley Stahl asked Welch about the PCBs the company had dumped in the river. "The word 'dump' is used!" he exclaimed. "We didn't dump! We had a permit from the U.S. government and the State of New York to do exactly what we did. Do you think I'd come to work in a company that would do that or condone that? I wouldn't do it, Lesley! This is nuts!"

Even taking into account the high costs of research, advertising, and big-name lobbyists, by the logic of the Superfund it obviously makes good sense for G.E. to fight on. Any postponement delays the cost of a cleanup and further dissipates the general sense of urgency. Thanks to tighter pollution standards, the Hudson is, by many measures, cleaner than it has been in at least a generation, and, to the extent that PCBs continue to represent a risk, it is one that people along the river have already had to learn to live with. As New York State's Attorney General, Eliot Spitzer, put it to me, "What begins to happen is the offending party can say, 'You've survived this long. Why bother?' They become beneficiaries of their own delay."

Two years ago, the New York State Canal Corporation, a public agency, spent two million dollars to renovate the dock on the Hudson at Fort Edward. The new dock has a massive concrete wall, a gazebo, and signs that say "Welcome to the Historic Fort Edward Yacht Basin." It has room to accommodate up to two dozen pleasure boats at a time, which, these days, is two dozen more than are likely to show up.

Over the years, the basin has silted up to the point where, this past summer, the water was only three or four feet deep in spots. The Canal Corporation used to dredge the basin regularly, but has not done so since 1977, because of its reluctance to deal with the contaminated sediment.

In many of the towns along the Hudson, the damage from PCBs is diffuse and difficult to quantify; in Fort Edward, however, it is pretty straightforward. Not only have the boats stopped coming; a lot of people's lawns have been carted off to toxic-waste dumps. Residents used to draw their water from private wells, but in the nineteen-eighties a plume of PCBs migrating from the G.E. factory forced the town to install a municipal water system, at a cost of two million dollars. In 1995, at a peculiarly ungenerous moment, G.E. filed suit against the town, arguing that the property-tax bill for the plant was too high. It won, and the town was forced to refund it a hundred and twenty-three thousand dollars.

A few weeks ago, I went to visit Fort Edward and stopped by the local Chamber of Commerce, which is housed in a low-slung red building on a plot of land that was, until a recent cleanup, contaminated by oil spills. I had made an appointment to see the president of the chamber, Pamela Brooks, and she had invited along a friend of hers, Joanne Fuller, who is an amateur historian. When I arrived, the two women showed me around the main room of the building—a visitors' center, occupied mostly by a model of the original Fort Edward, an important English outpost in the French and Indian War. The model was constructed by Fuller's husband, Richard, out of hundreds of tiny logs.

Brooks is a large woman with a world-weary air; Fuller is trim, with red-tinted hair and a voice sanded down by too much cigarette smoke. Both are committed, in spite of the odds, to turning Fort Edward into a tourist destination. "We're Vermont without the drive," Brooks told me. At one point during my visit, she pulled out some promotional literature for the town with the title "A River Runs Through It." "We didn't want to say 'A Superfund site runs through it,' " Fuller said. One

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of the schemes the two women told me they had entertained—in jest, I had to assume—was to report the sighting of a Loch Ness-type monster, grown huge and grotesque from feeding on PCBs.

The Fort Edward Chamber of Commerce has passed a resolution calling for dredging the Hudson for navigational purposes. It has remained neutral on the larger issue of dredging for environmental reasons, a topic so controversial in Fort Edward that it has split the town into two openly warring factions. (Just by coming out in favor of navigational dredging, the members of the chamber put themselves on the wrong side of the town supervisor, who subsequently informed them that they would be losing discretion over a five-thousand-dollar appropriation.) "We call ourselves hostages on the Hudson, and we feel ourselves that," Brooks said. Apparently not wanting to seem too defeatist, she added, "We are brave broads. We've talked about getting white suits and buckets, and going down there and saying 'If you aren't going to do it, then, by God, we will.' "

One of my visits upstate happened to coincide with a series of candlelight vigils sponsored by the environmental group Scenic Hudson. The group had picked forty spots along the river, one a park in downtown Hudson Falls. When I got there, about twenty-five people had gathered and were carrying around handwritten signs with slogans like "We Deserve a Clean River" and "Clean Up Your Mess!" There was also an information table, where copies of the fishing advisory were available, along with carp-shaped kitchen magnets bearing the State Health Department phone number and the message "Learn About Chemicals in the Fish You Catch."

Right after I arrived, a group of counter-protesters materialized out of the darkness. Representing a group called CEASE—Citizen Environmentalists Against Sludge Encapsulation—the counter-protesters were carrying fancier, commercially printed placards that said, "EPA: We Oppose Dredging." In contrast to the young, slackerish crowd from Scenic Hudson, who had come for folk songs and reverie, the older, pillar-of-the-community types from CEASE were there to make noise. "You are so ignorant!" I heard one CEASE member yell at a woman from the other side. "Just go over there with your little friends." Another one said, "Listen, sister, you were probably in three-quarter pants when we started this fight."

Dredging, if it ever does occur, will be an unpleasant business. It will be noisy and disruptive, and the contaminated sludge that it produces will have to be disposed of somewhere. It is this last prospect, in particular, that worries people along the upper Hudson. There has been a fair bit of speculation—and not without justification—that the sludge will end up buried, or "encapsulated," close to the river, on land that is now somebody's dairy farm.

G.E. has done its best to feed these anxieties. Its current ad campaign includes a dozen different full-page spreads that have been run in rotation in newspapers like the Glens Falls *Post-Star* and the Schenectady *Daily Gazette*, and television commercials that are being aired out of Albany, Poughkeepsie, and Kingston. "Will this be the last dive for ten years?" reads one ad, which pictures a kid doing a cannonball into a river. Another shows a huge rig pulling sludge out of an unidentified waterway, and making a terrible mess. The caption reads, "You can be guaranteed dredging will be devastating. You can't be guaranteed it will work."

Even in the best-case scenario, dredging will not, of course, fully solve the PCB problem in the Hudson. By now, the chemical is so widely dispersed that there will always be traces of it in the river, no matter what is done. An argument could be made, on strictly environmental grounds, that there are more effective ways to spend several hundred million dollars. But in legal terms the options are extremely limited. G.E. can be compelled only to pay to clean up the pollution it dumped in the Hudson, not to fulfill some broader or more far-reaching notion of ecological justice.

The arrival of the CEASE crowd came as a surprise to the organizers of the candlelight vigil, who appeared genuinely dispirited by the hostility directed their way. First, they tried to argue that they were the only group with a permit to be in the park. Then, as the vigil degenerated into a shouting match, they challenged the anti-dredging protesters' motives. The CEASE people were adamant that they had nothing to do with G.E., even after someone from the opposing side pointed to a set of tiny letters on their signs, which, when viewed from up close, clearly read, "General Electric Corporation." ♦

"Why can't you just learn to floss like other men?"

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